

Material Safety Data Sheet

(14270-04 – JB-4 Solution B)

Section 1: Chemical Product and Company Identification

<p>Product Name: JB-4 Solution B</p> <p>Catalog Number: 14270-01</p> <p>CAS#: See Section 2 below</p>	<p>Contact Information: Electron Microscopy Sciences 1560 Industry Road Hatfield, PA 19440 1-215-412-8400 (phone) 1-800-523-5874 (toll-free) 1-215-412-8450 (fax) Order Online: emsdiasum.com</p> <p>CHEMTREC (24-Hour Emergency Telephone), call: 1-800-424-9300</p>
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Section 2: Composition and Information on Ingredients

Item #	Name	CAS#	% in Product
1	1,4-Dioxane	000123911	0.001
2	Acetaldehyde	000075070	0.001
3	Benzenamine, N,N-dimethyl-	000121697	6
4	Ethylene oxide	000075218	0.001
5	Formaldehyde	000050000	0.001
6	Poly(ethylene oxide)	025322683	94

OSHA (ACGIH) Exposure Limits

		TWA		STEL		CEILING	
		ppm	mg/m3	ppm	mg/m3	ppm	mgm/3
CAS# 000050000 OS ACGIH	IDLH: 20	Not classified ---	--- ---	2/15 min ---	NE ---	--- 0.3 c	--- 0.37
CAS# 000075070 OS ACGIH	IDLH: 2,000	Not classified ---	360 ---	--- ---	--- ---	--- 25	--- 45
CAS# 00075218 OS ACGIH	IDLH: 800	Not classified 1	--- 1.8	--- ---	--- ---	--- ---	--- ---
CAS# 000121697 OS ACGIH	IDLH: 100	ACGIH; CA 5	25 25	--- 10	--- 10	--- ---	--- ---
CAS# 000123911 OS ACGIH	IDLH: 500	ACGIH; CA 20	360 72	--- ---	--- ---	--- ---	--- ---
CAS# 025322683	IDLH: NE	NE NE	NE NE	NE NE	NE NE	NE NE	NE NE

Section 3: Hazards Identification

Causes eye and skin irritation. Harmful if absorbed through skin.
Harmful if inhaled. May cause allergic skin reaction.

Hazard Ratings: These ratings are EMS' own assessments of the properties of the material using the ANSI/NFPA 704 Standard. Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).
If no data is listed the information is not available. Health – 2 Flammability – 1 Reactivity – 0

Section 4: First Aid Measures

Flush eyes with flowing water for at least 15 minutes.
If breathing is difficult, contact emergency personnel.
If swallowed, wash out mouth with water if person is conscious.
Remove contaminated clothing.
Remove to fresh air.
Separate eyelids with finger tips.
Wash skin with deluge of water for at least 15 minutes.

Section 5: Fire and Explosion Data

Flash point, deg. F.: >200	Method:
UEL: no data LEL: no data	Auto-ignition Temperature: deg. F: no data
Flammability Classification: no data	Flame Propagation Rate: no data
Hazardous Combustion Products: no data	

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Absorb liquids on absorbent material.
Contain spilled liquids.
Protect personnel from exposure.
Remove ignition sources.
Use appropriate personal protective equipment.
Ventilate the area.

Section 7 : Handling and Storage

Store at room temperature.

Section 8: Exposure Controls/Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves. Use process enclosures, local exhaust ventilation, or other engineering controls.

Section 9: Physical and Chemical Properties

Formula: no data	Vapor Pressure: no data	Formula Weight: no data
Vapor Density: no data	Boiling Point: no data	Specific Gravity: 1.12
Melting Point: no data	pH: no data	Solubility: miscible
Appearance: colorless liquid		

Section 10: Stability and Reactivity Data

Chemical stability: stable	Conditions to Avoid: heat, open flame
Incompatibility with other materials: oxidizing agents, acids, acid chlorides	
Hazardous Decomposition Products: no data	Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

No data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 26.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
000050000	U122	Formaldehyde
000075070	U001	Ethanal
000075218	U115	Oxirane
000121697	not listed	not listed
000123911	U108	1,4-Dioxane
025322683	not listed	not listed

Section 14: Transport Information

Refer to bill of lading or container label for DOT or other transportation hazard classification, if any.

Section 15: Other Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 – Column A identifies those items which are known to the State of California to cause cancer. Column B identifies items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
000050000	Yes	no
000075070	Yes	no
000075218	Yes	000075218
000121697	no	no
000123911	Yes	no
025322683	no	no

State Regulatory Information: If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	FL	MA	MN	PA	WA
000050000	FL	MA	MN	PA	WA
000075070	FL	MA	MN	PA	WA
000075218	FL	MA	MN	PA	WA
000121697	FL	MA	MN	PA	WA
000123911	FL	MA	MN	PA	WA
025322683	FL	MA	MN	PA	WA

SARA Toxic Release Chemicals (as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated Name	de minimis conc. %	Rep. Thres.
000050000	Formaldehyde	0.1	not listed
000075070	Acetaldehyde	0.1	not listed
000075218	Ethylene oxide	0.1	not listed
000121697	Dimethylaniline	1.0	not listed
000123911	Dioxane	0.1	not listed
025322683	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated Name	TPQ (pounds)	EHS-RQ (pounds)
000050000	Formaldehyde	500	100
000075070	Acetaldehyde	not listed	not listed
000075218	Ethylene oxide	1,000	10
000121697	Dimethylaniline	not listed	not listed
000123911	Dioxane	not listed	not listed
025322683	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated Name	RQ (pounds)
000050000	not listed	not listed
000075070	not listed	not listed
000075218	not listed	not listed
000121697	not listed	not listed
000123911	not listed	not listed
025322683	not listed	not listed

Section 16: Other Information:

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Electron Microscopy Sciences be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Electron Microscopy Sciences has been advised of the possibility of such damages.